RF Exposure MPE Exhibit

Limits for Occupational /Controlled Exposure

Maximum permissible exposure : MPE(mW/cm^2) = Freq(MHz)/1500

894 MHz/1500 = 0.596 mW/cm^2

The following calculations determine at what distance from the antenna the power density is equal to = 0.596 mW/cm^2

TX Output Power = 25dBm

Antenna Gain = 18dBi

EIRP of TX and Antenna = 43dBm

43dBm = 20W = 20000mW

MPE Calculation

Power Density = Pd(mW/cm^2) = $\frac{EIRP}{4\pi d^2}$

$$d = \sqrt{\frac{EIRP}{4\pi Pd}}$$

$$d = \sqrt{\frac{20000}{4\pi \times 0.596 mW/cm^2}}$$

d =51.6cm

The minimum safe distance for Occupational/Controlled exposure is 51.6cm for the Telcosat RBB-850 with installed antenna. This is the worst case for both Uplink and Downlink. The maximum antenna gain stated for both Uplink and downlink. This product is installed by trained professionals .